

CLAIMS

I claim:

1. An apparatus for filling a syringe from a medicine vial comprising:
 - a) a means for holding a medicine vial, and
 - b) one or more interchangeable syringe guides operably associated with said means, said syringe guides accommodating different sizes or types of syringes.
2. The apparatus of claim 1 wherein said means is capable of holding different sizes of medicine vials.
3. The apparatus of claim 1 wherein said changeable syringe guides include a means for retaining the syringe when the plunger is withdrawn to fill the syringe.
4. The apparatus of claim 1, wherein:
 - a) said means for holding a medicine vial comprises a cavity in communication with a medicine vial being held by said apparatus, said cavity having at least one open side, and
 - b) wherein each of said one or more interchangeable syringe guides may fit securely into said cavity.
5. The apparatus of claim 4 wherein said interchangeable syringe guides are made of such a material or so shaped that upon insertion of a syringe into said interchangeable

syringe guide, said syringe is visible along its barrel.

6. The apparatus of claim 4 wherein said syringe guides feature a tab on one end, and said means for holding a medicine vial features a slot for receiving said tab and wherein said tab and said slot are so arranged that the syringe guides can be placed in the apparatus in only one orientation.
7. The apparatus of claim 4 wherein said means for holding a medicine vial features a tab on one end, and said interchangeable syringe guides feature a slot for receiving said tab and wherein said tab and said slot are so arranged that said interchangeable syringe guides can be placed in the apparatus in only one orientation.
8. The apparatus of claim 4 wherein each of said interchangeable syringe guides feature a longitudinal aperture for insertion of a syringe, thereby guiding said syringe to the seal in said medicine vial.
9. The apparatus of claim 8 wherein said interchangeable syringe guides are made of a clear material which magnifies the view of a syringe inserted therein.
10. The apparatus of claim 4 wherein the interchangeable syringe guides feature a “V” shaped groove serving to align a syringe placed therein with said medicine vial.
11. The apparatus of claim 10 wherein the interchangeable syringe guides are hingeably associated with said means for holding the vial.

12. The apparatus of claim 10 wherein the interchangeable syringe guides nest with each other.
13. The apparatus of claim 1 wherein a lid is operably associated with said means for holding a medicine vial.
14. The apparatus of claim 13 wherein said lid has a magnifying feature to increase the visibility of the syringes.
15. The apparatus of claim 13 wherein said lid has a magnifying feature to increase the visibility of the medicine vial.
16. The apparatus of claim 13 wherein said lid assists in retaining said medicine vial.
17. The apparatus of claim 13 wherein said lid assists in retaining the syringes.
18. An apparatus for filling a syringe from a medicine vial comprising:
 - a) a means for holding a medicine vial, and
 - b) a repositionable syringe guide operably associated with said means, said syringe guide accommodating different sizes or types of syringes.
19. The apparatus of claim 18 wherein said means is capable of holding different sizes of medicine vials.

20. The apparatus of claim 18 wherein said repositionable syringe guide comprises:
 - a) a reference surface located proximate to the seal of said medicine vial,
 - b) an opposing surface opposite said reference surface,
 - c) more than one aperture leading from said reference surface to said opposing surface, said apertures being of different diameters and lengths to accommodate different syringes.
21. The apparatus of claim 20 wherein said apertures intersect along their lengths.
22. The apparatus of claim 20 wherein said repositionable syringe guide is constructed of clear material and the sides along the length of said apertures are shaped to magnify the view of any syringes inserted into said apertures.
23. The apparatus of claim 18 wherein said repositionable syringe guide is repositioned for a different sized syringe by removing said repositionable syringe guide, rotating it to align the appropriate aperture, and replacing it into the apparatus.
24. The apparatus of claim 18 wherein said repositionable syringe guide is rotatably associated with said means for holding a medicine vial.
25. The apparatus of claim 18 wherein said repositionable syringe guide comprises means for retaining a syringe inserted therein when the syringe plunger is withdrawn to fill said syringe.

26. The apparatus of claim 18 wherein said repositionable syringe guide comprises:

- a) a nominally polygonal cross section, and
- b) "V-shaped" grooves down the length of its sides with each said "V-shaped" groove having a different depth so as to support different diameter syringes at the same distance from the central axis of said repositionable syringe guide.

27. A method for filling a syringe from a medicine vial comprising:

- a) using an apparatus having
 - I) a means for holding a medicine vial, and
 - II) changeable syringe guides operably associated with said means, said syringe guides accommodating different sizes and types of syringes,
- b) by placing a medicine vial in said means,
- c) selecting an appropriately sized syringe guide and placing it in the apparatus,
- d) inserting said syringe through said syringe guide into said medicine vial, and
- e) filling said syringe.

28. A method for filling a syringe from a medicine vial comprising:

- a) using an apparatus having
 - I) a means for holding a medicine vial, and
 - II) a repositionable syringe guide operably associated with said means, said syringe guide accommodating different sizes and types of

syringes,

- b) by placing a medicine vial in said means,
- c) repositioning said syringe guide so that an appropriately sized guiding feature is aligned with said medicine vial,
- d) inserting said syringe through the guide into the vial, and
- e) filling said syringe.

29. An apparatus for filling a syringe from a medicine vial comprising:

- a) a base having two ends, sides connecting said ends, and at least two apertures of different diameters passing from one end to the other to accommodate different size syringes,
- b) means for holding said medicine vial in communication with said apertures.

30. The apparatus of claim 29 wherein said ends are not parallel, and the apertures are of different lengths to accommodate syringes of different lengths.

31. The apparatus of claim 29 wherein at least one of the ends is non-planar so that the apertures are of different lengths to accommodate syringes of different lengths.

32. The apparatus of claim 29 further comprising a means for retaining said syringe to said base when the plunger is withdrawn to fill said syringe.

33. The apparatus of claim 29 wherein said base is made of a clear material so that said syringes are visible after insertion into said base.

34. The apparatus of claim 33 wherein the sides of said base are curved to provide a magnified view of a syringe inserted into said base.

35. The apparatus of claim 29 wherein said means for retaining said medicine vial comprises slots in the base at the end of each aperture, said slots being transverse to the axis of the aperture and being wide enough at the surface of the base to accommodate the neck of the vial but being undercut below the surface of the base to accommodate the seal cap portion at the end of said medicine vial.

36. The apparatus of claim 35 wherein said slots are at a non-perpendicular angle to the axis of the respective holes.

37. The apparatus of claim 29 wherein said means for retaining said medicine vial comprises a member shaped generally to contain said medicine vial, said member having near the vial top a means to join with said base, said base having a matching feature to accept said means for retaining said medicine vial.

38. The apparatus of claim 1, wherein;

- I) said means for holding a medicine vial comprises,
 - a) a chamber shaped to accept a medicine vial,
 - b) a slot or aperture in one of the walls of said chamber, said slot or aperture large enough to accommodate at least the neck of a medicine vial, and
 - c) an interlocking feature located external to said chamber at said slot or

aperture, and,

II) said one or more interchangeable syringe guides comprise,

a) a recess for receiving the top of a medicine vial protruding from said

slot or aperture, and

b) an interlocking feature complimentary to said interlocking feature of
said means for holding a medicine vial,

III) wherein the interlocking of said means for holding a medicine vial and said
one or more interchangeable syringe guides serves to retain said medicine
vial.

39. The apparatus of claim 3 wherein said means for retaining a syringe engages tabs on
the open end of the barrel of a syringe inserted into said guide.

40. The apparatus of claim 3 wherein said means for retaining the syringe engages the edge
of the open end of the barrel of a syringe inserted into said guide.

41. A method for filling a syringe from a medicine vial comprising:

a) using an apparatus having a

I) a means for holding a medicine vial, and

II) changeable syringe guides operably associated with said means, said
syringe guides accommodating different sizes and types of
syringes,

b) selecting an appropriately sized syringe guide and placing a syringe in it,

c) withdrawing the piston in the syringe to draw in a volume of air equal to the
amount of medicine desired,

- d) removing the syringe at least partially so that the needle does not interfere when
- e) assembling the means for holding the medicine vial, the vial, and the syringe
 - guide with syringe,
- f) fully reinserting the syringe, so that the needle will penetrate the seal in the now present vial,
- g) expelling the air from the syringe into the vial, and
- h) withdrawing the piston to draw in the correct amount of medicine.